

D268, D269

Independent Zone Control

Operation and Installation Manual



radionics

A member of the
Bosch Group

Notice

Notice

The material and instructions covered in this manual have been carefully checked for accuracy and are presumed to be reliable. However, Radionics, Inc. assumes no responsibility for inaccuracies and reserves the right to modify and revise this manual without notice.

It is our goal at Radionics to always supply accurate and reliable documentation. If a discrepancy is found in this documentation, please mail a photocopy of the corrected material to:

Radionics, Inc.,	Radionics
c/o Technical Writing Dept.	c/o Technical Support
1800 Abbott Street	1 Park Gate Close, Bredbury
P.O. Box 80012	Stockport, Cheshire, SK6 2SZ, England
Salinas, CA 93912-0012	

© 2001 Radionics, Inc., Salinas, CA, U.S.A. All rights reserved.

FCC Notice

Part 15

This equipment generates and uses radio frequency energy. If not installed and used in accordance with the manufacturer's instructions, it may cause interference to radio and television reception. It has been tested and found to comply with the specifications in Part 15 of FCC rules for Class B Computing Devices.

If this equipment causes interference to radio or television reception - which can be determined by turning the equipment on and off - the installer is encouraged to correct the interference by one or more of the following measures: 1) Reorient the antenna of the radio/television. 2) Connect the AC transformer to a different outlet so the control panel and radio/television are on different branch circuits. 3) relocate the control panel with respect to the radio/television.

If necessary, the installer should consult an experienced radio/television technician for additional suggestions, or send for the "Interference Handbook" prepared by the Federal Communications Commission. This booklet is available from the U.S. Government Printing Office, Washington D.C. 20402, stock number 004-000-00450-7.

Description

The D268/269 Independent Zone Control Modules are accessory devices for use with Radionics control/communicators. You can use the D268/D269 to arm and disarm a single 1k Ω zone of a D4112, D6112, or D8112 or single 1k Ω point of a D7112 or D9112 Control/Communicator panel. The D268/D269 features a user programmable passcode and can initiate Opening/Closing reports by zone or point when the panel is programmed for this response. You can install up to four D269 Keypads for each D268 Module with at least *one* D269 Keypad being required. Entry and exit delay times provided by the D268 allow the D269 keypads to be located inside the protected area. The operation of the D268 Module is not affected by tampering to the D269 Keypad.

Operation

D268 Module Loop Inputs

The D268 branches a single 1k Ω zone or point of the panel into two separate loops: one delayed and one instant. You can wire sensors to the loops in series (normally closed) or in parallel (normally open). Install a Radionics model D105BL 1k Ω end-of-line resistor, supplied with the module, beyond the last sensor of each loop to provide supervision (see Figure 4).

Delayed Loop

Faulting the delayed loop while the D268/D269 Independent Zone Control is armed starts the entry delay time on *both* loops. Allowing entry time to expire without disarming triggers an alarm even if both loops are restored. Exit time is provided when arming.

Instant Loop

Faulting the instant loop while the D268/D269 is armed immediately causes an alarm. No entry time is provided unless the delay loop is faulted *first*. Exit delay time is provided when arming.

Entry/Exit Delay

Both loops must be normal before you can arm the D268/D269. Entering the correct passcode provides 60 seconds of exit time before the unit arms. After arming, faulting the delay loop starts 30 seconds of entry time in which the D268/D269 must be disarmed to prevent an alarm. Once entry and exit delay starts both loops are delayed.

Restorals

The D268 resets automatically when both the delayed and instant loops are normal. However, when one loop is faulted, the other cannot signal a new alarm to the panel. Restoral of the zone or point output is delayed three seconds after both loops are restored.

Burglar Alarm Output

Opening or shorting either of the D268 loops while the zone control is armed causes the output to *short* the panel zone or point for a minimum of three seconds. Each zone or point is supervised with a Radionics model 105BL 1k Ω end-of-line resistor.

D268, D269

Operation

Operation (continued)

Open/Close Output

This output presents an open circuit to the panel when the D268/D269 is disarmed, and a normal circuit when the D268/D269 is armed and not in alarm.

Alarm Output Terminals

Two form C contacts, each rated at 2 Amps, are provided for an optional alarm device, such as a bell. This relay is activated when the D268/D269 goes into alarm, and is reset when the D268/D269 is disarmed. A D136 Relay needs to be installed in the D268 for this option.

D269 Keypad

Green LED - Loop Status

The Loop Status LED lights when both the delayed and instant loops are normal. It's switched off when one or both loops are faulted. This LED is not affected by armed status.

Red LED - Armed Status

The Armed Status LED starts blinking when the correct passcode is entered to indicate exit delay time in progress. This LED is on while the D268/D269 is armed. This LED is off while the D268/D269 is disarmed.

Warning Sounder

During entry delay, the warning sounder latches *on* until the D268/D269 is disarmed or an alarm occurs. If a numbered key is pressed while the unit is disarmed and has a loop faulted, a warning sound indicates that it's not ready to arm.

Standard Combination

You enter a four-digit passcode into the D269 Keypad to arm and disarm the D268 zones. The D268 is shipped from the factory with a default passcode of 1234 or 2222. Once the unit is installed and power is connected, you can change these numbers to a different passcode. This passcode is the same at all D269 Keypads connected to that D268.

Programming

Programming or Changing the Combination

You need to install a jumper plug on J1 in the "A" (COMB CHG) position (see Figure 2) to enable the passcode change feature. To prevent further passcode changes, place the jumper plug in the "B" (NO) position.

You must know the existing (old) passcode before you can change it to a new one. If you do not know the passcode, see *Recovering the Standard passcode* in this manual. If you make a mistake while changing the passcode, wait 5 seconds and repeat the procedure. If the procedure is not completed within 60 seconds, the keypad reverts to the old passcode.

Only change the passcode when the keypad is disarmed. Do not program the same digit twice in a row. Do not program the first and last digits the same.

Programming or Changing the Passcode (continued)

1. Press the *center bottom blank key* once (see Figure 1).
2. Enter the old passcode once (1234 or 2222 when first installed).
3. Enter the new four digit passcode *twice*.
4. Arm and disarm the D268/D269 to test the new passcode.
5. Place jumper J1 in the desired position ("B" to prevent passcode changes, "A" to enable passcode changes).

Note: After programming the passcode, loss of power to the D268 for 24 hours or more may cause the keypad to default to the standard passcode of 1234 or 2222 when power is restored.

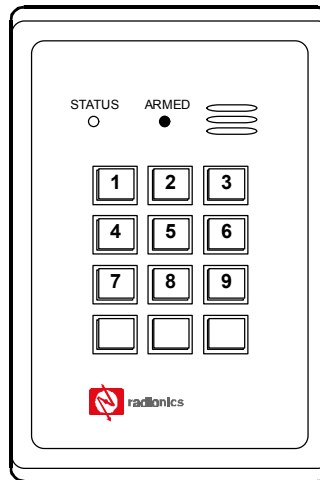


Figure 1: D269 Keypad

Recovering the Standard Passcode

If the passcode is not known, the standard passcode of 1234 or 2222 can be recovered as follows:

1. **Remove power to the D268** by disconnecting all wires from D268 terminal 2 (+12V supply).
2. Discharge the large capacitor (C3) indicated in Figure 2, by momentarily shorting its leads together with a jumper wire.
3. Reconnect power to the D268 Module terminal 2. The passcode will be 1234 or 2222 when power is restored.

Programming

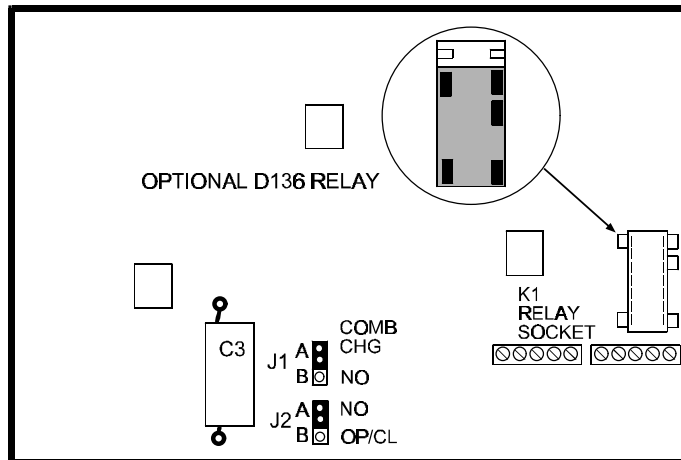


Figure 2: D268 Module

Using the D268 Module with the D8112 Control/Communicator

The D268 controls arming/disarming and entry/exit delay for the zone input to which it is connected. Sub-control zones use distinctive zone codes which do not follow typical zone code programming rules. The first two digits of the zone code follow *Special Zone Code* programming. The last two digits follow standard programming parameters. (See the 8112: MAIN Program Entry Guide, Section 22.4 for complete sub-control zone code programming details.)

Supervised Independent Zone Controls (Opening and Closing Reports)

As an installation option, the zone output of the D268 (see Figure 4) can be switched *open* when the D268 is *disarmed* and returned to normal when the sub-control arms. This can be used to generate opening and closing reports by zone from a supervised panel. The panel must be programmed for opening/ closing reports.

When using a D8112, supervised sub-control zone codes must be programmed with a 3 in the first digit position and a 2 in the second digit position. The 3 2 __ code is a *Special Zone Code* used by the D8112 to identify a supervised sub-control zone. Install jumper plug J2 in the “B” OP/CL position on the D268 Module (see Figure 2) to enable opening and closing reports from the zone controlled by the D268.

Non-Supervised Independent Zone Controls (No Opening and Closing Reports)

The zone code for a non-supervised, sub-control zone must be programmed with 3 in the first digit position and 4 in the second digit position. The 3 4 -- code is a *Special Zone Code* used by the D8112 to identify a non-supervised, sub-control zone. When the zone code begins with 3 4, opening and closing reports are not transmitted from the zone controlled by the D268.

Priority Zone Functions

Programming the D268 as a priority zone enables two valuable functions. When the zone code for the D268 is programmed with a 3, 4, 7, or 8 in the fourth digit position the sub-control zone must be armed before the main system can be master armed. In addition, priority zone programming provides for an arm/disarm status display on the Command Center for the sub-control zone. If you attempt to arm the system when the D268 is not armed, a dash (-) is displayed on the Alpha command center to indicate a fault. Pressing any key displays the disarmed priority zone as a faulted zone. Some standard priority sub-control zone codes are shown below:

- | | |
|------|---|
| 3233 | Supervised, no restoral reports, steady bell on alarm, Alpha display visible, priority zone. |
| 3433 | Non-supervised, no restoral reports, steady bell on alarm, Alpha display visible, priority zone. |
| 3273 | Supervised, restoral reports, steady bell on alarm, Alpha display visible, priority zone with no swinger shunt. |

D8112 Control/Communicator Audible Alarms

The D8112 can be programmed to sound an audible alarm from its alarm output when the D268/D269 is tripped while armed. The D8112 must be programmed with a bell time and the D8112 zone code must be programmed for audible alarms.

RECOMMENDED ZONE CODES					
FORMAT	J2* on D268	Digit 1	Digit 2	Digit 3	Digit 4
No Opening /Closing					
Audible	A or B	3	4	3 or 7	1 - 8
Silent	A	3	4	1 or 5	1 - 8
Priority Zone	B	3	4	1, 3, 5, 7	3, 4, 7, 8
Opening/Closing					
Audible	B	3	2	3 or 7	1 - 8
Silent	B	3	2	1 or 5	1 - 8
Priority Zone	B	3	2	1, 3, 5, 7	3, 4, 7, 8

* Bell Control from the D268

When jumper J2 of the D268 Module is installed in the "B" (OP/CL) position, entering the passcode into the D269 silences the bell output of the D8112. The D268 silences only those alarms initiated by its zone input to the D8112. Bell time restarts with every new trip on the zone input. The D268 *cannot* deactivate the Silent Alarm Output (D8112 terminal 8) if the zone is programmed "Silent".

Using the D268/D269 with a D7112 or D9112 Control/Communicator

The D268 controls arming and disarming, and entry and exit delay times for a single 1kW point. Bell control is not available from the D268/D269 on the D7112.

Supervising the D268 (Opening and Closing Reports)

The point output of the D268 module can be switched *open* when the D268 is disarmed, and restored to normal when the point arms. This can allow you to send open and closing reports to a receiver. Refer to the D7112 or D9112 *Program Entry Guide* for point code programming options.

Install a jumper plug on J2 in the "B" OP/CL position on the D268 module to enable opening and closing reports from the point controlled by the D268.

D9112 Control/Communicator Options

The D268/D269 can control arming/disarming and entry/exit delay for the point input it's connected to. Install a jumper plug J2 in the "B" position on the D268 to enable the sending of point openings and closings. In this configuration, bell control from the D268 is not available. If the D268 is tripped into alarm and is programmed to sound the bell, you must silence the alarm bell at its assigned command center. You can also use the D268's on-board Form C relay to provide a bell output and to allow bell control from the D268/D269. You may use Point Index #31 from the default Program Record Sheet for the D268/D269 for this application.

The D268/D269 can also be used to arm and disarm individual areas. When in this configuration, it should be the only point in the area. The scope of the command center should be programmed to include the D268/D269's area (either Account Wide or Panel Wide scope). Install a jumper plug J2 in the "B" position to enable point opening and closing reports *and* to provide bell control. Assign a passcode with an authority level having no functions enabled with it. This allows you to silence the bell only in the area where the passcode is assigned. You may use Point Index #28 from the default Program Record Sheet, with one exception: program the point response "2" instead of "1."

D268, D269

Installation

D268 Module Installation

Mounting the D268

The D268 Independent Zone Control Module is suitable for installation in a D8103 Enclosure or a D8108A Attack Resistant Enclosure. Both enclosures available for UL certified Local and Central Station Grade A or B, and Police connected burglar alarm applications. Align the D268 Module with any of the four mounting locations, and fasten the module in place with the three mounting screws provided.

Wiring the D268

Three wires are used to connect the D268 Module to the panel, +12 VDC, common, and zone or point input. These wires are connected to a 10-position terminal block on the D268 Module (see Figure 4).

The D268 output (terminal 5) can be connected to a 1k Ω zone or point of a Radionics control/communicator. The zone or point input requires only a single wire from the D268 that connects to its positive terminal. **No terminating resistor is required.**

D268 Protective Zones

D268 sensor loops function independently, and are similar to the loops on the panel. Each sensor loop is supervised with a Radionics model 105BL 1k Ω end-of-line resistor supplied with the module (see Figure 4). Protected wiring (Figure 5) may be required for applications where the D268 sub-zone cable is exposed. You can use 22 AWG (minimum) wire in place of the tin copper shield braid (Figure 5; Note 2), and rigid conduit or electrical metallic tubing can be used in place of the PVC tubing (Note 3). All splice boxes must be tampered.

Dry contact sensing devices may be connected in series (normally-closed) or in parallel (normally open) to each sensor loop. Each loop can detect open circuit, closed circuit, and normal circuit conditions. For complete information, see *Using the D268 Module with the D8112* and *Using the D268 with the D7112/D9112* in this manual.

Optional Alarm Device Wiring

An optional alarm device, such as a bell, can be installed to annunciate alarms associated with the D268/D269. Figure 4 shows the wiring of the optional device from the D268 Module to the panel. A Radionics model D136 Relay must be installed in the K1 socket of the D268 Module (see Figure 2) to operate this optional device. The socket is designed so the relay can be inserted in either the top or bottom positions. Insert the relay with the three legs facing away from C3. If a fault is detected on a D268 loop, the on board form C relay is activated. The relay is latched until you enter the passcode. See the appropriate *Operation and Installation Manual* for further details on the programming and operation of the Alarm Output.

D268 Jumpers

The D268 Module contains two movable jumpers. The location of these jumpers is shown in Figure 2. Jumper J1 is used to enable and disable the passcode change function from a D269 Keypad. With the jumper plug installed in the "A" (COMB CHG) position, you can change the passcode. If the jumper plug is installed in the "B" (NO) position, you cannot change the passcode.

Jumper J2 enables the control/communicator to receive opening and closing reports from the D268. When the jumper plug is in the "B" (OP/CL) position, opening and closing reports are sent. When the jumper plug is in the "A" (NO) position, opening and closing reports are *not* sent.

D268 LED: The red LED on the D268 Module is for manufacturing test purposes only.

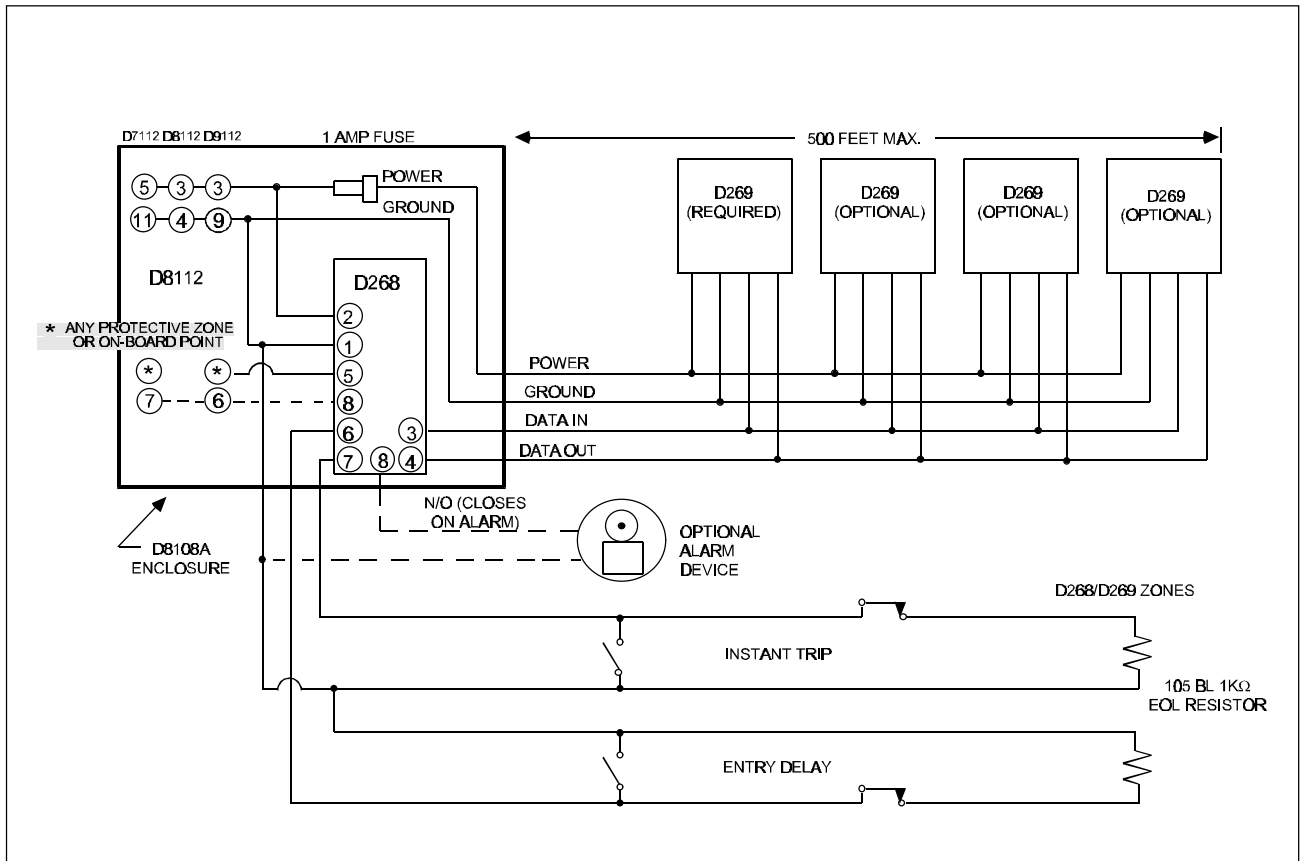
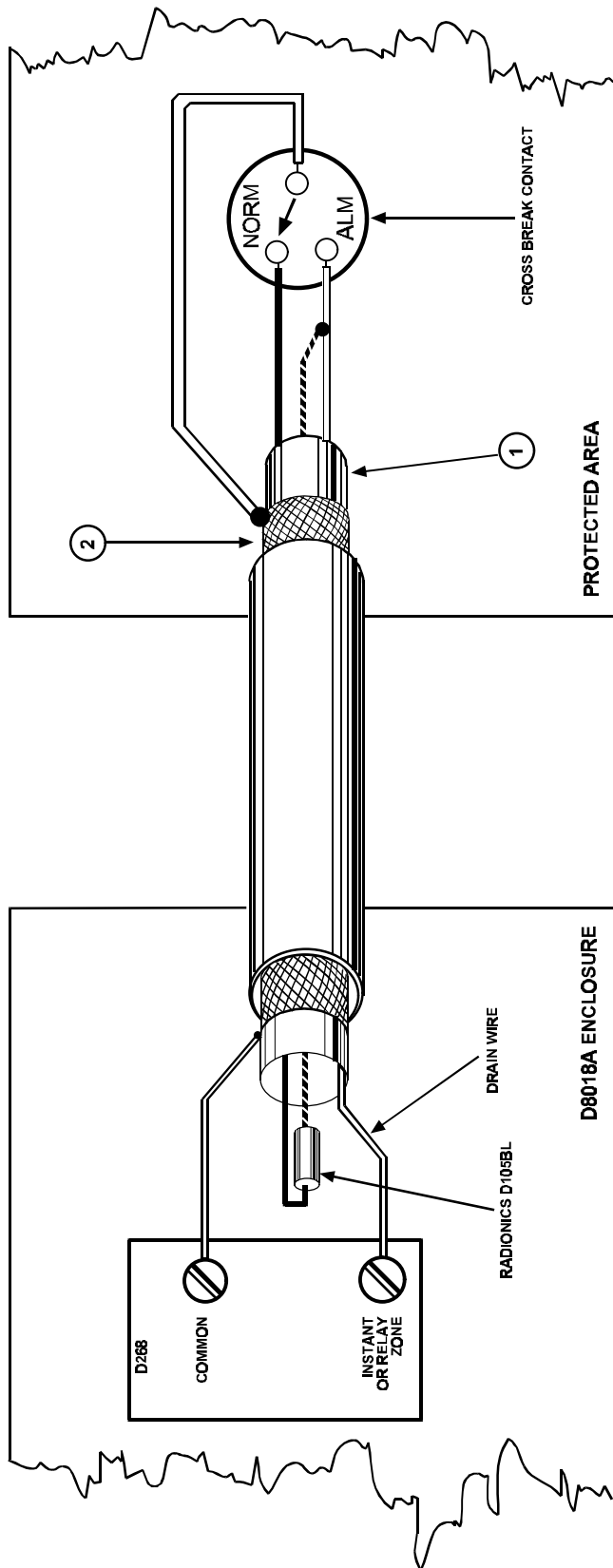


Figure 4: Wiring the D268/D269

Installation



- NOTES: THIS ASSEMBLY CONSISTS OF 3 SEPARATE CONCENTRIC MATERIALS.
- ① U.L. LISTED SHIELDED JACKETED CABLE 2 CONDUCTORS AND DRAIN WIRE EXAMPLE: BELDEN #7594
 - ② TIN COPPER SHIELD BRAID - EXAMPLE: BELDEN #8669
 - ③ OUTER VINYL JACKET U.L. LISTED RECOGNIZED TUBING ALPHA PVC 105/ 5/4 IN. DIA
 - ④ SEPARATE SHIELDED CABLES MAY BE USED FOR INSTANT OR DELAYED ZONES

D269 Keypad Installation

The D269 Keypad is shipped with a faceplate, a backbox/circuit assembly, a 4-wire cable, two mounting screws, two collapsible clips, and two wall mounting plates. The keypad installs flush to the wall surface, and may be installed into a single-gang box, if desired. Do not mount the D269 in a location exposed to direct sunlight, this may make the LEDs less visible. Follow the directions below for mounting.

1. To install the D269 flush with the wall surface, make an opening in the wall 2" wide x 3.25" high.
2. Route the 4-wire cable through the wiring opening in the backbox, and plug it into the 4-pin connector on the circuit board.
3. If you are installing the D269 into a single-gang wall box, see step 3a. If you are installing it without single-gang box, see step 3b.
 - 3a. Insert the D269 into the wall opening and attach it to single-gang wall box with screws provided. Go to step 5.
 - 3b. Insert screws (#6 x 2" screws supplied with the unit) into mounting holes. Place the wall mounting plate on the backbox, aligning it with the screw.

Slide a collapsible clip over each screw. Tighten each screw until firm. Do NOT tighten screws enough to bend collapsible clips.
4. Insert the D269 assembly into the wall opening. Tighten each screw firmly.
5. Position the faceplate over the assembly, hook it over the top and gently push the bottom of the plate until it snaps into place.

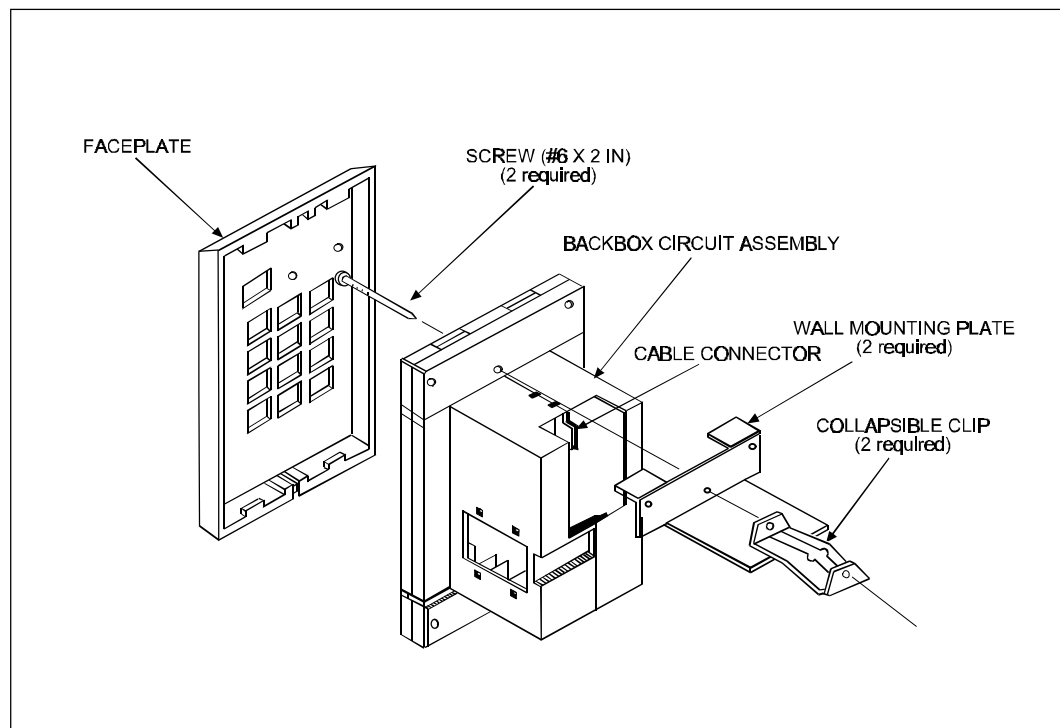


Figure 6: Wall Mounting the D269 Keypad

Installation

Wiring the D269 Keypads

You can wire up to four D269 Keypads in parallel to the D268 Module (see Figure 4). You must install at least *one* D269. A cable with a four pin connector and four wire leads is supplied with each keypad. The furthest D269 can be located a maximum of 500 feet away from the panel enclosure. Using a larger gauge wire does NOT increase this distance.

UL certificated installations: UL certifications require a D8108A Attack Resistant Enclosure, and a 1 Amp in-line fuse (Radionics model D201, supplied with the D268 Module) on the red power supply wire. Only one fuse is required per D268/D269 sub-system.

D268/D269 Configurations

You can use the D268 and D269 in several sub-zone applications. Figure 7 shows a typical configuration of the D268 and D269 protecting a sub-zone *within* the main protected premises. You can locate the D269 either inside or outside of the protected area. Protected wiring (Figure 5) is not required for this application.

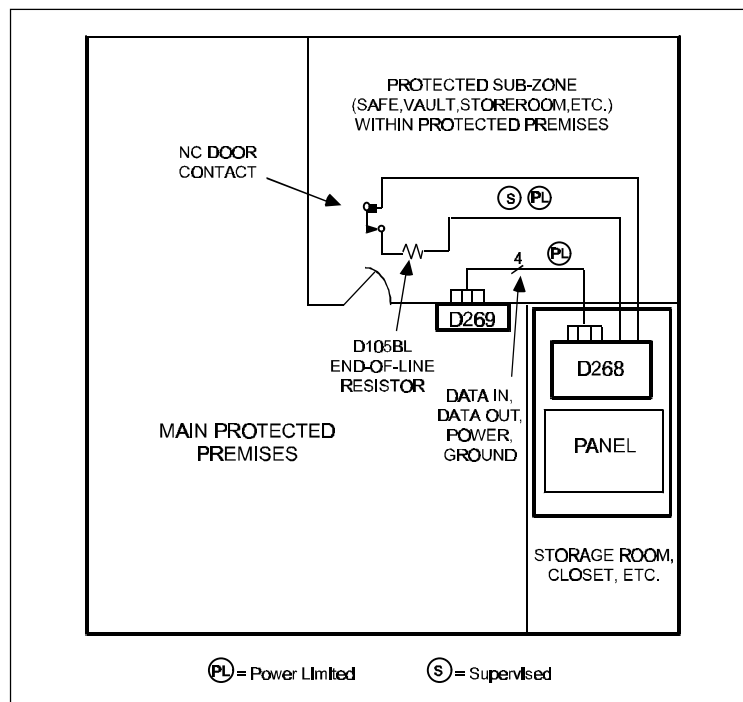


Figure 7 Independent Zone Control Within Protected Premises

Figure 8 shows a D269 located *outside* the main protected premises. As in the previous case, the D269 can be located either inside or outside of the protected area. Protected wiring (Figure 5) *is required* for this application.

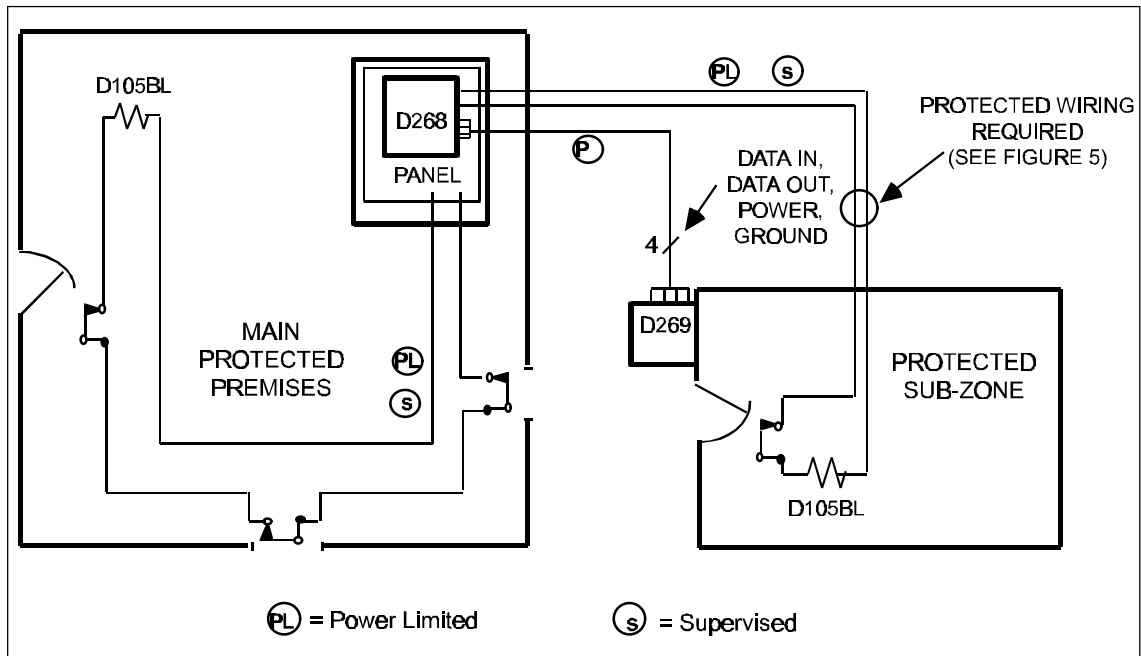


Figure 8: Zone Control Outside the Main Protected Premises

You can connect up to eight D268 modules to a single panel. Each D268 can be connected to a D269 that has a unique combination. This configuration is useful in multiple premises applications (see Figure 9). Instant zones can be used for sub-zone protection, and delay zones can be used for premises entry. Protected wiring (Figure 5) *is required* for the connection of the D268 sub-zones.

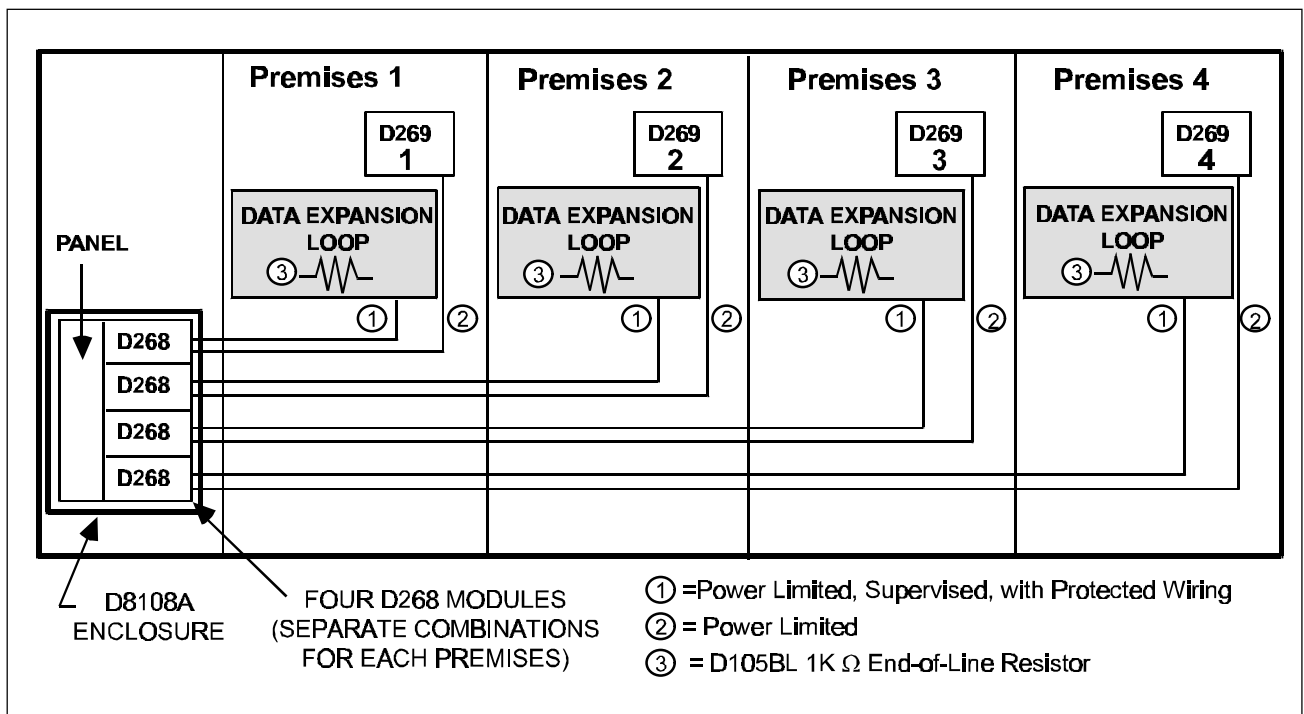


Figure 9: Multiple Premises

Installation

D268/D269 Configurations (continued)

For applications requiring more than four D268 Modules, install a second enclosure to house the additional modules (see Figure 10). Wires for the additional Modules feed through rigid conduit or electrical metallic tubing installed on the outside of both enclosure.

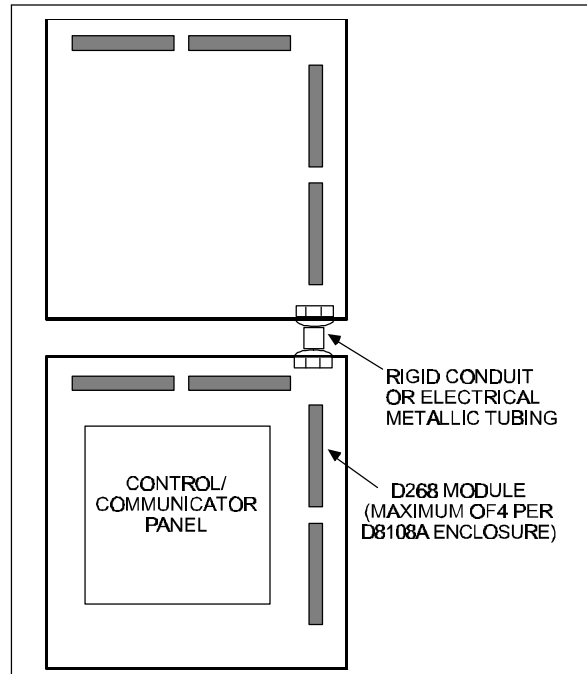


Figure 10: Multiple D268 Module Installation

Specifications

Operating Voltage:

Nominal 12 VDC supplied from the panel auxiliary power supply.

Current Requirements:

D268: 20mA, zones normal
50mA, sub-system in alarm
D269: 30mA , sub-system armed
60mA, entry delay

Optional Alarm Device Contacts:

Form C contacts, 2 Amps maximum

D269 Keypad Dimensions (H x W x D):

4.6 in. x 3.1 in. x 1.8 in. (11.7 cm. x 7.9 cm. x 4.6 cm.)

Keypad Wiring:

22 AWG 4-wire cable is required. A maximum of 500 feet of cable may be used to connect the D268 to the D269 Keypad(s).

Operating Temperature:

0°C to 50°C (32°F to 122°F)

Non-Condensing Relative Humidity:

5% to 85% @ 30°C (86°F)

UL Certificated Applications require a D8108A Attack Resistant Enclosure protected by an electronic vibration detector (Sentrol model 5402), and a 1 Amp in-line fuse (Radionics model D201, supplied with the D268) on the red power supply wire. (Only one fuse is required for D268/D269 subsystems.)

